

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 June 2005 (23.06.2005)

PCT

(10) International Publication Number
WO 2005/056076 A3

(51) International Patent Classification⁷: A61H 31/00,
31/02

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(21) International Application Number:
PCT/US2004/039888

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(22) International Filing Date:
29 November 2004 (29.11.2004)

(25) Filing Language: English

(26) Publication Language: English

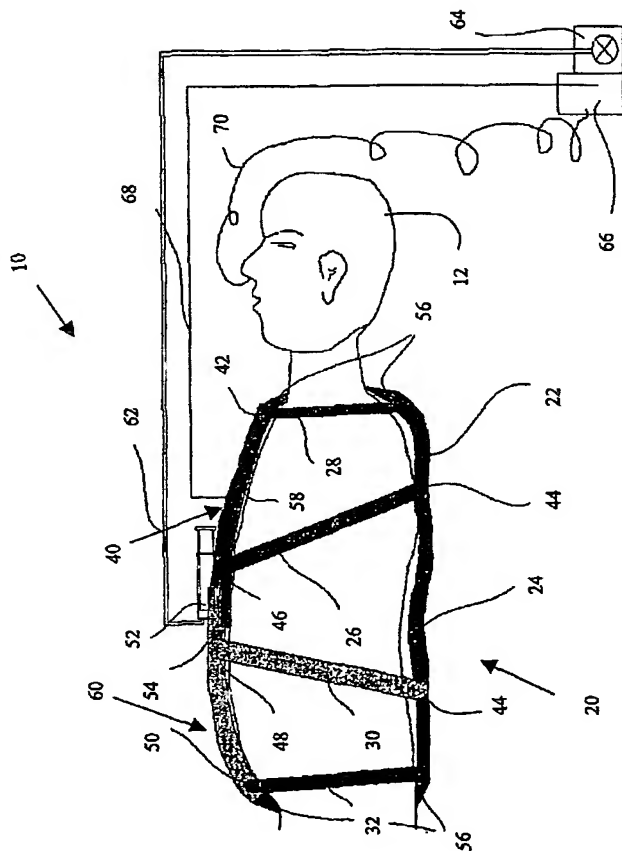
(30) Priority Data:
60/527,092 4 December 2003 (04.12.2003) US

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,

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[Continued on next page]

(54) Title: NEGATIVE PRESSURE VENTILATION AND RESUSCITATION SYSTEM



(57) Abstract: A negative pressure ventilation system comprising a dynamically movable, multi-component artificial rib cage configured to fit snugly around the patient's own chest wall and abdomen is disclosed. The shape, dimensions and the dynamic movement of the artificial rib cage are designed to mimic those of the patient's own chest wall. The artificial rib cage includes an artificial spine to which are connected artificial ribs for forming an artificial chest wall including a sternum component. An abdominal component for placement on the patient's abdomen is connected to the chest wall component through a translating element which allows the abdominal component to move towards and away from the chest wall component. The chest wall and abdominal components cooperatively interact to allow the ventilator to move both the chest wall and abdomen during inspiration and expiration, mimicking the patient's own natural breathing pattern.

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KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

- (88) **Date of publication of the international search report:**
18 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.